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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,675	03/29/2004	Takuya Ishii	8861-494US (P33883-01)	2990

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EXAMINER

NGUYEN, MATTHEW VAN

ART UNIT PAPER NUMBER

2838

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/811,675

Applicant(s)

ISHII ET AL.

Examiner

MATTHEW V. NGUYEN

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/29/04; 11/28/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. The disclosure should be carefully reviewed and ensure that any and all grammatical, idiomatic, and spelling or other minor errors are corrected.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishii et al. (U.S. Pat. No. 6,946,820).

With regard to claims 1-5, Ishii et al. (i.e., Figs. 4-6) shows a multi-output dc-dc converter comprising first to nth (i.e., $n = 2$) output circuits for receiving an input dc voltage (1) and outputting first to nth output dc voltages (71, 73), a switching circuit (21, 22, 41), an inductor (32), a control circuit (82), the switching circuit (21, 22, 41) having an ON state, in which the input dc voltage (1) is applied to the inductor (32) and magnetic energy is stored, and having first to nth OFF states, in which the magnetic energy is released to one of the first to nth output circuits, the control circuit (82) distributing the switching cycles of the switching circuit (21, 22, 41) to first to nth outputs to be controlled and to detect the first to nth output dc voltages (71, 73), in the case when one switching cycle of the switching is used to control a kth ($1 \leq k \leq n$) output, to select a kth OFF state after the period of said

ON state is adjusted so that kth output dc voltage becomes a predetermined value and to maintain the kth OFF state until the release of the magnetic energy stored in the inductor (32) to the kth output circuit is completed, and shift the kth OFF state to the ON state after the release of the magnetic energy stored in the inductor (32) to the kth output circuit is completed, and the switching cycle being not smaller than a predetermined value (as recited in claims 1-3); or to select a kth OFF state after the period of the ON state being adjusted so that the kth output dc voltage becomes a predetermined value and to select an OFF state other than the kth OFF state when the kth output dc voltage exceeds a predetermined upper limit value, and the operation being stopped when all of the first to nth output dc voltage exceed their upper limit values having been set (as recited in claims 4, 5) (see col. 8, line 54 – col. 12 line 56).

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nochi (U.S. Pat. No. 5,070,294), Barrett (U.S. Pat. No. 5,070,294), Sano et al. (U.S. Pat. No. 6,486,567) and Liu et al. (U.S. Pat. No. 6,903,535) also disclose multi-output dc-dc converter circuits each of which comprises substantial elements as recited in the claims of the instant application.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew V. Nguyen whose telephone number is (571) 272-2081.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2800.

Matthew V. Nguyen
MATTHEW V. NGUYEN
PRIMARY EXAMINER